# Two New Species of Fireflies (Coleoptera: Lampyridae)

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The two rather unusual lampyrids described below were found in the collection of Cornell University, and I thank Dr. Henry Dietrich for the privilege of describing them.

## I

The insect described below is only the fourth species to be assigned to the genus *Lucernuta,* and the smallest of the four. *Lucernuta* was separated from the large Asian genus *Pyrocoelia* by E. Olivier (Revue Scientifique du Bourbonnais, 1911, Vol. 24, p. 65) by virtue of the 8th ventral abdominal segment being emarginate instead of mucronate as in the latter genus, a rather uncertain criterion in the absence of any other markedly different characters. In Pars 9 of the Coleopterorum Catalogus (1910) and previously, Olivier had combined *Pyrocoelia* under *Lucernuta.*

**Lucernuta hammari** n. sp.

Type locality, São Paulo, Brazil. No date or collector's name.

Source, Hammar Collection, Cornell University.

Type No. 3481, Cornell University.

Over-all dimensions, *ca.* 9.0 mm. long by 4.0 mm. broad.

Outline elliptical. Body flat (artifact?).

Pronotum 2.3 mm. long by 3.6 mm. broad; outline parabolic. Forward edge reflexed; base bisinuate. Anterior median third colorless and transparent, except for a narrow median brown discoloration which widens toward apical margin; eyes visible through the transparent areas. Disk convex, bearing two large, roughly elliptical, cream-colored spots separated by a triangular brown vitta, broadest at base where it darkens to black, and extending forward a little on the lateral margins of the cream-colored areas. Lateral extensions flat, translucent brown; these

and the transparent areas coarsely and densely punctate; convex disk less pronouncedly so. Short, fine pubescence.

Scutellum dark brown, edged black; apex acute. Mesonotal plates dull dark brown. Central portion of scutellum and inside edges of mesonotal plates very dark red.

Elytra 6.65 mm. long by 2.05 mm. broad; widest at midlength; very flat (artifact?). Wide explanate margins, becoming evanescent at about apical 5th. Epipleura very wide, the interior ridge tapering rapidly to join the inner edge of the explanate margin. Lateral edges narrowly brown; explanate margins and nearly equal width on disk nearly transparent, darkening toward suture. On each elytron a dark brown vitta beginning at base and becoming fainter toward the apex. Elytra appear darker over wings and body. Brown portions coarsely rugose; transparent portions finely punctate; submarginal line of coarse punctures. Rather long, oblique pubescence, not dense but particularly marked at suture and lateral edges.

Frons very dark brown, slightly concave; 0.97 mm. across eyes, 0.56 mm. between them; eyes mediocre and head rather small. Maxillary palpi small, brown, outline conoidal. Mandibles very small and project ventro-posteriorly (artifact?); apical portions very slender.

Antennae 3.6 mm. long; 11 articles; brown, hairy, slightly compressed.

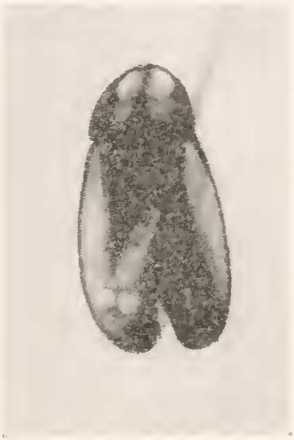
Ventral surface brown, including legs; hairy. Ventral abdominal segments 6 and 7 each about 1.5 times as long as 5th, and probably luminous in life; 8 very small, emarginate; 9 ogival, brown. Dorsal segments 6 and 7 with lateral lobes; pygidium trilobed, very dark brown, hairy.

Abdominal spiracles dorsal.

Aedeagus: The exposed portion of the aedeagus is a rather simple structure consisting of two lateral lobes the edges of which appear to form a continuous loop in the ventral view, but in lateral view the tip is turned downward. The dorsal aspect is that of a narrow V with the median lobe projecting between the sides. See accompanying sketch.

Habitus: The accompanying photograph shows the rather unusual appearance of the insect.

Female not known.



*Lucernuta hammari* n. sp.

Actual length 9.0 mm.

II

The genus *Pteroptyx* was established by E. Olivier (1902) for lampyrids of the general form of *Luciola* but the males having the apical portions of the elytra folded down over the end of the abdomen and the last ventral segment more or less strongly trilobed or trisinuate. The elytra of the female are described as normal. In 1907 Olivier described only two species in this genus, *P. malaccae* (Gorham) and *P. testaceum* (Motsch.). Gorham described the peculiar structure of the terminal abdominal segments of *malaccae,* which he regarded doubtfully as the female. Olivier's sketch of the abdomen of *testeceum* (1907, Pl. 3, fig. 11) does not show such a structure, the segments being of the form normal for *Luciola.* In 1910 Olivier listed nine species, four more being transferred from *Luciola,* and in 1911 he mentioned that one more new species

had been described; since then three more have been described, from Indo-China and Sumatra. Five of the species are from New Guinea. *Pteroptyx* is obviously close to *Pyrophanes* in the structure of the terminal abdominal segments, although in the latter it is the pygidium that is involved in the structure, and the elytral apices are not deflexed.

In the collection of Cornell University there is a single specimen which represents a new species of *Pteroptyx,* and it is described below as *P. papuae.* It is somewhat difficult to decide whether this specimen is male or female. There is no partially extruded aedeagus, or ovipositor; the relatively large eyes indicate a male. Gorham notes that his Malacca specimens and one of his Madras specimens of *P. malaccae* had ventral abdominal segments much as described for the present species, while another Madras specimen had an abdomen normal for a female *Luciola.* He refers to the elytra as "obliquely truncate at the apex," which is the way they appear when viewed from above. In *P. cribellata* E. Oliv. the last ventral segment is described as trilobed and ciliate; in *P. microthorax* E. Oliv., with two deep oval emarginations separated by a long narrow lobe with a truncate apex; and in *P. pupilla* E. Oliv., as divided into three slender teeth or mucrons. All three of these species are from New Guinea. *P. antennata* E. Oliv., also from New Guinea, has the last ventral of the male medially aculeate, a description which would apparently apply also to *P. testaceum* (Motsch.) of the East Indies. The last ventral segment of the female of *P. cribellata* is described as being truncate triangular. From these descriptions it would appear that this specimen and also those of Gorham having a similar abdominal structure are males.

**Pteroptyx papuae** n. sp.

Type locality, Monda, Buna District, PAPUA. Collected by W. G. Bodenstein, December 28, 1943.

Type No. 3480, Cornell University.

Dimensions: 4.5 mm. long by 1.65 mm. broad. Outline probably parallel in life; in the specimen the elytra are slightly divergent.

Pronotum sub-rectangular, *ca,* 0.7 mm. long by 1.15 mm. broad. Densely and coarsely punctate; narrow longitudinal median channel; uniform dark brown except for four small, nearly circular, yellow spots, two near the middle of the disk and close to the median channel, and two, less distinct and somewhat more widely separated, near the basal edge; basal margin reflexed. Short, pale pubescence, especially pronounced on margins.

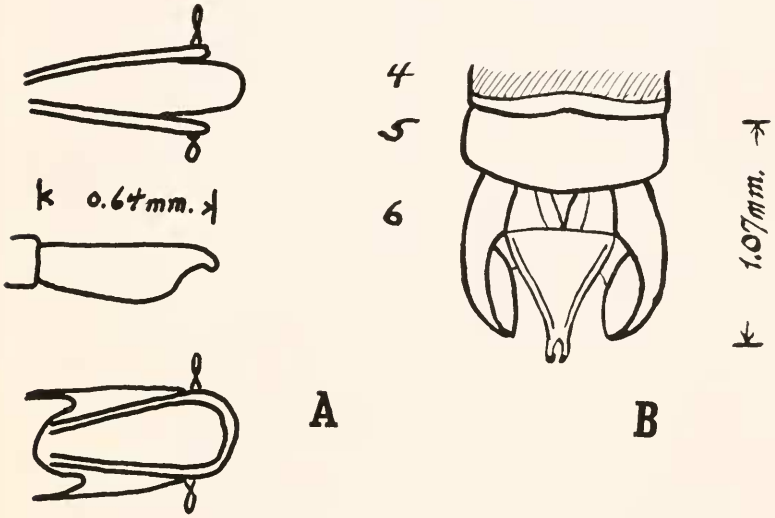



Fig. A. Aedeagus of *Lucernuta hammari* n. sp.

Upper: Dorsal view
Middle: Lateral view
Bottom: Ventral view

Fig. B. Terminal ventral segments of *Pteroptyx papuae* n. sp.

Scutellum brown; mesonotal plates dark yellow.

Elytra 3.83 mm. long by 0.82 mm. broad; divergent from scutellum (*vide supra*); coarsely punctate, the punctures tending to form longitudinal lines; fine, short, oblique yellow pubescence; translucent dark brown, appearing dull dark brown, almost black, over wings; very narrow explanate margins with a

single row of coarse punctures; no evident costae. Terminal lobes of the elytra bent downward and forward as though in life they embraced the end of the abdomen.

Frons brown, concave; 0.9 mm. across the relatively large eyes; intraocular margins widely divergent. Mouth parts small; mandibles slender; maxillary palpi relatively large, outline conoidal, flat on inner surface. Clypeus apparently connate, the epistome ending in a semicircular white margin.

Antennae incomplete, but apparently *ca.* 1.5 mm. long; nearly black, hairy, not compressed; 2nd article about $\frac{1}{2}$ as long as 1st and $\frac{2}{3}$ as long as 3d; 4 to 6 (all present) subequal in length.

Thoracic sterna brown. Pygidium ogival, convex, translucent yellowish.

Ventral abdominal segments 2 and 3 brown; 4 white on posterior edge; 5 white, luminous; 6 remarkable in consisting mainly of two long, white, arcuate lobes, apparently luminous, between which projects a flat, triangular, very hairy, nearly transparent lobe with a bifurcate apex, these apices being curved, and bent dorsad. See accompanying sketch. Abdominal spiracles not visible on the ventral surface.

Legs short, dark brown; claws simple; no tibial spurs visible.

## References

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